

**Venezuela helicopter attack: Pilot Oscar Pérez in bloody siege**



Two police officers and several "terrorists" have been killed in an operation to capture a helicopter pilot accused of leading an armed rebellion in Venezuela last year, officials say. Venezuelan forces surrounded a house in the town of El Junquito, near the capital, Caracas, as they targeted the "cell" linked to pilot Oscar Pérez. The authorities said they had arrested five people who they accuse of being part of a criminal group. It is unclear what became of Mr Pérez.

Prominent government member Diosdado Cabello tweeted that Mr Pérez had opened fire on police. Mr Pérez was wanted after he used a stolen helicopter to throw grenades at government buildings on 27 June. In footage posted on social media on Monday, Mr Pérez said he had offered to turn himself in but that he believed authorities were initially trying to kill him rather than negotiate his surrender. "They're shooting at us with RPGs [rocket-propelled grenades]," he said. "There are civilians inside here. We said we'd turn ourselves in, but they don't want to let us turn ourselves in. They want to kill us," Mr Pérez added. He then describes how those at the property with him were forced to "crouch down", adding: "Now we're negotiating." He ended the video, which he uploaded to the photo sharing site Instagram, with a message for the people of Venezuela, who he urged not to "lose hope". Who is Oscar Pérez? Mr Pérez was on the run after launching a helicopter attack on the Venezuelan Supreme Court during opposition street protests last year. He became the country's most talked-about man and appeared in an online video on 5 July vowing to keep up his attacks on the government. President Nicolás Maduro declared him a terrorist, accusing him of stealing a military helicopter and dropping grenades on the court to mount a coup. Now in his mid-30s, Mr Pérez has been a member of the forensic police force, known as the CICPC, for 15 years. The Venezuelan media emphasise that he is a highly trained agent, part of the Special Actions Brigade (BAE), where he is chief of operations for the Air Force division. He has been pictured scuba-diving while brandishing a high-calibre weapon underwater and showing off his skills by shooting a target over his shoulder, behind his back, using only a make-up mirror as a guide. The government has also accused Mr Pérez of having ties to the United States, specifically the CIA, which it also often says is trying to overthrow it. As yet, Mr Pérez has no confirmed links with any international or domestic groups, although he has claimed to be part of an anti-government coalition of military, police and civilians. *BBC*

**How flowering plants conquered the world**



Scientists think they have the answer to a puzzle that baffled even Charles Darwin: How flowers evolved and spread to become the dominant plants on Earth. Flowering plants, or angiosperms, make up about 90% of all living plant species, including most food crops. In the distant past, they outpaced plants such as conifers and ferns, which predate them, but how they did this has been a mystery. New research suggests it is down to genome size - and small is better. "It really comes down to a question of cell size

and how you can build a small cell and still retain all the attributes that are necessary for life," says Kevin Simonin from San Francisco State University in California, US. **'Abominable mystery'** Hundreds of millions of years ago, the Earth was dominated by ferns and conifers. Then, about 150 million years ago, the first flowering plants appeared on the scene. They quickly spread to all parts of the world, changing the landscape from muted green to a riot of vibrant colour. The reasons behind the incredible success and diversity of flowering plants have been debated for centuries. Charles Darwin himself called it an "abominable mystery", fearing this apparent sudden leap might challenge his theory of evolution. Simonin and co-researcher Adam Roddy, of Yale University, wondered if the size of the plant's genetic material - or genome - might be important. The biologists analysed data held by the Royal Botanic Gardens, Kew, on the genome size of hundreds of plants, including flowering plants, gymnosperms (a group of plants, which include conifers and Ginkgo) and ferns. 'Strong evidence' They then compared genome size with anatomical features such as the abundance of pores on leaves. This provides "strong evidence", they say, that the success and rapid spread of flowering plants around the world is down to "genome downsizing". By shrinking the size of the genome, which is contained within the nucleus of the cell, plants can build smaller cells. In turn, this allows greater carbon dioxide uptake and carbon gain from photosynthesis, the process by which plants use light energy to turn carbon dioxide and water into glucose and oxygen. Angiosperms can pack more veins and pores into their leaves, maximising their productivity. The researchers say genome-downsizing happened only in the angiosperms, and this was "a necessary prerequisite for rapid growth rates among land plants". "The flowering plants are the most important group of plants on Earth and now we finally know why they have been so successful," they say. The research published in the journal PLOS Biology raises more questions about plants. For instance, why were flowering plants able to shrink their genomes more than others? And why do ferns and conifers still exist, despite their large genomes and cells? *BBC*

**French salmonella baby milk scandal 'affects 83 countries'**

More than 12 million boxes of powdered baby milk have now been recalled in 83 countries in a salmonella scandal involving French company Lactalis. The dairy firm's CEO, Emmanuel Besnier, confirmed the extent of the contamination risk to French media. The products have been subject to a recall since December, after salmonella bacteria was discovered at a factory. Lawsuits have been filed by parents who say their children became unwell after drinking the formula. A



spokesman told the BBC that all the countries affected had been informed, in Europe, Asia, Latin America and Africa. The UK, US and Australia were not affected, he added. The Lactalis group is one of the world's largest producers of dairy products, with annual sales of €17bn (\$21bn; £15bn), it has 246 production sites in 47 countries and employs 15,000 people in France alone. Recalls have now been issued by the firm three times, and cover its Picot, Milumel and Taranis brands. Salmonella can cause severe diarrhoea, stomach cramps, vomiting, and severe dehydration. It can be life-threatening, especially in young children. So far 35 cases have been reported in France and another one has been confirmed in Spain. Another possible case is being investigated in Greece, French authorities said on Friday. In an exclusive interview in French newspaper Journal du Dimanche, the Lactalis chief executive denied the firm had attempted to hide the outbreak at the plant. "There are complaints and there will be an investigation with which we will fully collaborate," said Mr Besnier. He also promised the company would compensate any families affected. The company has said they believe the contamination was caused by renovation work at their Celia factory in Craon, in north-west France. France's agriculture minister said products from the factory will be banned indefinitely whilst the investigation is still ongoing. The French government has warned the company it must expect penalties over its handling of the affair. They also threatened to impose sanctions against retailers on Thursday, after it emerged that several major supermarket chains had continued to sell products that could have been contaminated. *BBC*

**Black Death 'spread by humans not rats'**

Rats were not to blame for the spread of plague during the Black Death, according to a study. The rodents and their fleas were thought to have spread a series of outbreaks in 14th-19th Century Europe. But a team from the universities of Oslo and Ferrara now says the first, the Black Death, can be "largely ascribed to human fleas and body lice". The study, in the Proceedings of the National Academy of Science, uses records of its pattern and scale. The Black Death claimed an estimated 25 million lives, more than a third of Europe's population, between 1347 and 1351. "We have good mortality data from outbreaks in nine cities in Europe," Prof Nils Stenseth, from the University of Oslo, told BBC News. "So we could construct models of the disease dynamics [there]." He and his colleagues then simulated disease outbreaks in each of these cities, creating three models where the disease was spread by: Rats airborne transmission fleas and lice that live on humans and their clothes. In seven out of the nine cities studied, the "human parasite model" was a much better match for the pattern of the outbreak. It mirrored how quickly it spread and how many people it affected. "The conclusion was very clear," said Prof Stenseth. "The lice model fits best." "It would be unlikely to spread as fast as it did if it was transmitted by rats. "It would have to go through this extra loop of the rats, rather than being spread from person to person."



**'Stay at home'** Prof Stenseth said the study was primarily of historical interest - using modern understanding of disease to unpick what had happened during one of the most devastating pandemics in human history. But, he pointed out, "understanding as much as possible about what goes on during an epidemic is always good if you are to reduce mortality [in the future]". Plague is still endemic in some countries of Asia, Africa and the Americas, where it persists in "reservoirs" of infected rodents. "Our study suggests that to prevent future spread hygiene is most important," said Prof Stenseth. "It also suggests that if you're ill, you shouldn't come into contact with too many people. So if you're sick, stay at home." *BBC*

**Huge oil spill left after burning tanker sinks off China**



Chinese ships are racing to clean up a giant oil spill after an Iranian tanker sank in the East China Sea. The 120 sq km (46 sq mile) oil slick is thought to be made up of heavy fuel that was used to power the vessel. The Sanchi oil tanker sank on Sunday and officials say all its crew members are dead. It was carrying 136,000 tonnes of ultra-light crude oil from Iran which generates a toxic underwater slick that would be invisible from the surface. Both the fuel

and the ultra-light oil could cause devastating damage to marine life. The Sanchi and a cargo ship collided 260km (160 miles) off Shanghai on 6 January, with the tanker then drifting south-east towards Japan. It caught fire after the collision and burnt for more than a week before sinking off China's east coast. Burning oil tanker sinks off China Iranian officials now say all 32 crew members - 30 Iranians and two Bangladeshis - on the tanker were killed. On Monday, China Central Television said a search and rescue operation had been cancelled and a clean-up operation had begun after a fire on the surface was extinguished. They said two ships were spraying the water with chemical agents designed to dissolve the oil. The BBC's China correspondent Robin Brant says the oil slick has more than doubled in size since Sunday. The big concern now is for the environmental impact, he said. There could also be a very tall plume of condensate, this ultra-refined form of oil, underneath the surface. Condensate, which creates products such as jet fuel, is very different from the black crude that is often seen in oil spills. It is toxic, low in density and considerably more explosive than regular crude. The cause of the collision is still not known. Some 13 vessels and an Iranian commando unit took part in the salvage operation, amid bad weather. On Saturday, salvage workers boarded the vessel and found the bodies of two crew members in a lifeboat. Only one other body had been found during the week of salvage operations. The rescue workers also retrieved the ship's black box but had to leave quickly because of the toxic smoke and high temperatures. *BBC*

**Dolphin diet study gives conservation clues**

Wild dolphins need up to 33,000 calories a day, researchers have found - equivalent to about 60 portions of salmon. In contrast, Olympic swimmers - who are smaller and less active - burn about 12,000 calories a day during training. Studying the metabolic rates of whales and dolphins is important for their conservation, say scientists. They found that a common bottlenose dolphin needs 10 to 25kg of fish each day to survive in the oceans. The study was carried out on common bottlenose dolphins living in Sarasota Bay off



Florida. Adult and young dolphins were captured briefly to measure their resting metabolic rate. This provides an estimate of how much a dolphin needs to eat in a day, said Andreas Fahlman of Woods Hole Oceanographic Institution, which led the research. "We can then add this up for all dolphins and estimate how much fish/prey they need," he said. "This may be vitally important when considering managing fisheries and making sure that the quota are not too high so that animals lack food." The researchers found that a 200 kg dolphin would burn between 16,500 and 33,000 calories a day, which is lower than expected. In contrast, an Olympic swimmer carrying out intensive exercise might need around 12,000 calories. For a dolphin, the amount of energy required depends on whether the animal is resting, sleeping, diving or swimming, as well as the temperature of the ocean. **Health check** Finding out more about the diet and energy requirements of whales and dolphin will help in their conservation, say the researchers. They measured lung function in wild dolphins for the first time. "Lung function testing of wild populations in different areas of the world may help us understand respiratory health in wild populations," said Dr Fahlman. "We can use this as a health check of various populations and thereby the environment. If the dolphins are sick, there may be problems with the environment." The research is published in the journal Royal Society Open Science. *BBC*